

IN THE CLAIMS:

Please note that all claims currently pending and under consideration in the referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

Please cancel Claims 1-10, 21, 22 and 24 without prejudice or disclaimer.

1-10. (Cancelled)

11. (Previously Amended) A spent nuclear fuel storage system configured for thermal neutron absorption and corrosion resistance comprising:

a poisoned member, the poisoned member being substantially comprised of a cast stainless steel alloy, the alloy comprising:

gadolinium at from about 0.1% to 4% by weight;

chromium at from about 13% to 25% by weight;

molybdenum at from about 1.5% to 4% by weight;

manganese at from about 1% to 3% by weight;

nickel at from about 10% to 25% by weight;

residual amounts of phosphorus, sulfur, silicon, carbon, and nitrogen; and

a balance of material substantially comprising iron.

12. (original) A system as in claim 11 wherein the poisoned member is an internal.

13. (original) A system as in claim 11 wherein the poisoned member is a canister.

14. (Previously Amended) A system as in claim 11 further comprising a second poisoned member having the composition of the cast stainless steel alloy, and wherein the poisoned member is an internal and the second poisoned member is a canister.

15. (Previously Amended) A nickel-based alloy comprising:

gadolinium at from about 0.1% to 10% by weight;

chromium at from about 13% to 24% by weight;
molybdenum at from about 1.5% to 16% by weight;
iron at from about 0.01% to 6% by weight;
residual amounts of manganese, phosphorus, sulfur, silicon, carbon, and
nitrogen;
a balance of material substantially comprising nickel; and
the nickel-based alloy being in a wrought state.

16. (original) A nickel-based alloy as in claim 15 wherein the iron is present at from about 0.01% to 3% by weight.

17. (original) A nickel-based alloy as in claim 15 wherein the chromium is present at from 20% to 24% by weight, and the molybdenum is present at from about 14% to 16% by weight.

18. (original) A nickel-based alloy as in claim 15 wherein the gadolinium is present at from about 0.1% to 3% by weight.

19. (original) A nickel-based alloy as in claim 15 wherein the nickel-based alloy is configured as an internal.

20. (original) A nickel-based alloy as in claim 15 wherein the nickel-based alloy is configured as a canister.

21. (Cancelled)

22. (Cancelled)

23. (Previously Amended) A nickel-based alloy comprising:
gadolinium at from about 0.1% to 10% by weight;

chromium at from about 20% to 24% by weight;
molybdenum at from about 14% to 16% by weight;
iron at from about 0.01 to 6% by weight;
residual amounts of manganese, phosphorus, sulfur, silicon, carbon, and
nitrogen; and
a balance of material substantially comprising nickel wherein the nickel is
present at greater than 50% by weight.

24. (Cancelled)

25. (Previously Amended) A nickel-based alloy comprising:
gadolinium at from about 0.1% to 10% by weight;
chromium at from about 13% to 24% by weight;
molybdenum at from about 1.5% to 16% by weight;
iron at from about 0.01 to 6% by weight;
residual amounts of manganese, phosphorus, sulfur, silicon, carbon, and
nitrogen; and
a balance of material substantially comprising nickel wherein the nickel is
present at greater than 50% by weight, wherein the nickel-based alloy is
configured as an internal.

26. (Previously Amended) A nickel-based alloy comprising:
gadolinium at from about 0.1% to 10% by weight;
chromium at from about 13% to 24% by weight;
molybdenum at from about 1.5% to 16% by weight;
iron at from about 0.01 to 6% by weight;
residual amounts of manganese, phosphorus, sulfur, silicon, carbon, and
nitrogen; and

51

a balance of material substantially comprising nickel wherein the nickel is present at greater than 50% by weight, wherein the nickel-based alloy is configured as a canister.

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